

Substances Education:

What's in? What's out?

What hurts? What helps?

An update on substances, practical prevention strategies and recovery support.

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VCU

VIRGINIA COMMONWEALTH UNIVERSITY

Student Affairs

The Wellness
Resource Center

Who is this woman?

Why is she talking to us?

- Nurse Practitioner (FNP) & Director, The Well 28 years at VCU
 - Frustrated stand-up comedienne
 - Scientist & Seeker of Truth (PhD)
 - Unusual Fantasy Life
- &
- Mom... *and thus very humble!*

What is the most devastating drug?



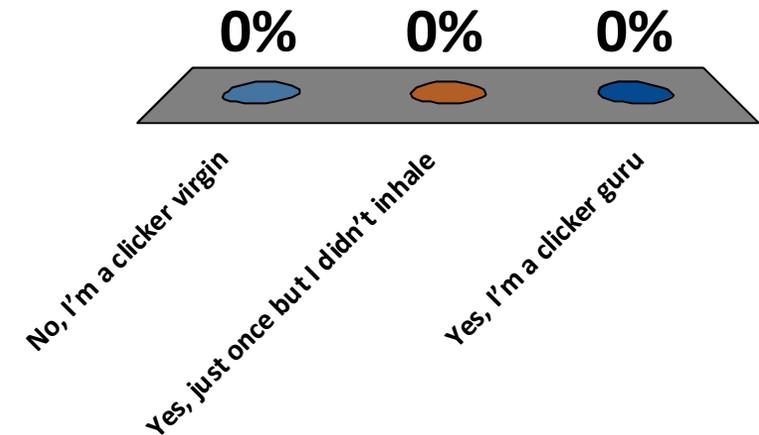
How to use Clickers

- Immediate Audience Response Device
- **Anonymous**
- Radio Frequency- *you don't have to point it at anything*
- You can change your response by just hitting a different number, but ...
- **ONLY one response will record per person!**



Have you ever used clickers before?

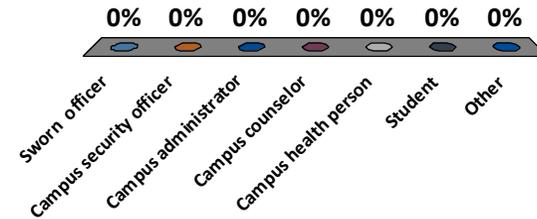
- A. No, I'm a clicker virgin
- B. Yes, just once but I didn't inhale
- C. Yes, I'm a clicker guru



Response
Counter

Who is in the room?

- A. Sworn officer
- B. Campus security officer
- C. Campus administrator
- D. Campus counselor
- E. Campus health person
- F. Student
- G. Other



Response
Counter

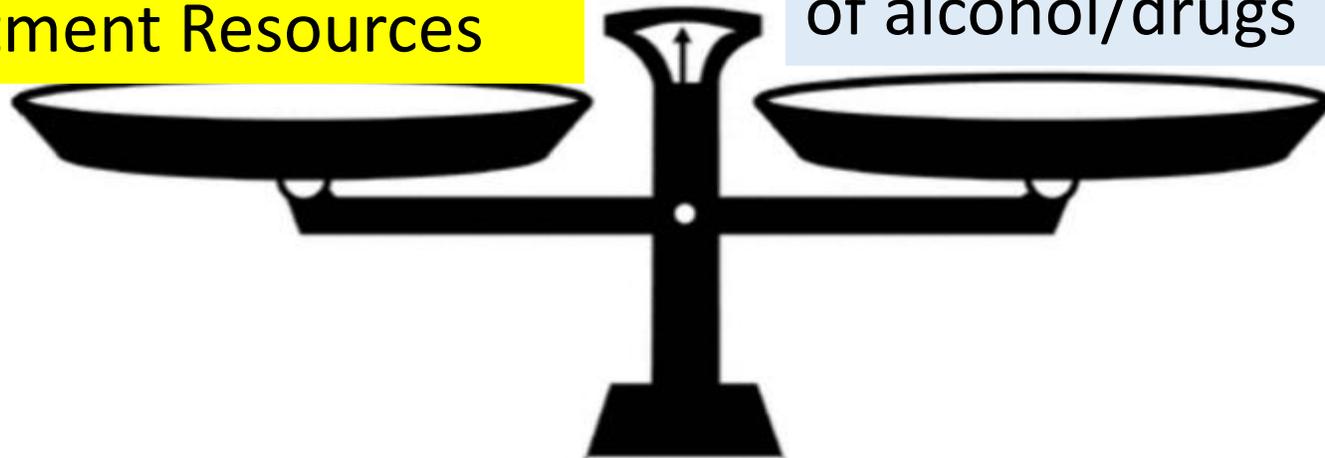
A growing dissatisfaction nationally...



On Feb. 9, 2016, [the White House announced](#) that under the administration's 2017 budget, federal efforts to **reduce the demand** for drugs would for the first time be funded at similar levels as efforts to **reduce the supply**.

DEMAND for drugs =
Intervention and
Treatment Resources

SUPPLY for drugs =
Drug dealers and source
of alcohol/drugs



Why this talk?

Substances and law enforcement

- 80% of offenders abuse drugs or alcohol.
- Nearly 50% of jail and prison inmates have substance use disorder.
- Approximately 60% of individuals arrested for most types of crimes test positive for illegal drugs at arrest.
- **Alcohol, more than any illegal drug**, was found to be closely associated with violent crimes, including murder, rape, assault, child and spousal abuse.

What's changed? What works for prevention?

• OLD

- **Health Terrorism** – scare them into not using is OUT!
- **Focusing on Problem** rather than health and solutions is OUT!
- **Drug by Drug education** is not as helpful as providing a framework for understanding

• NEW

- **Framework based in science not drug by drug scare tactic education**
- **Substance Use Disorder...** a Spectrum of use/abuse/disease
- **Intervention/Recovery Support**
- **Bystander approach**
- **Motivational Interviewing** and Brief Screening and Intervention
- **Social Norms** – focus on the true norms not misperceptions!

Investing in the Solution -- Not the Problem:

Treatment and Recovery

- Preventing future crime and re-arrest is impossible without treatment of addiction.
 - Approximately 95% of inmates return to alcohol and drug use after release from prison.
 - 60 - 80% of drug abusers commit a new crime (typically a drug-driven crime) after release from prison.

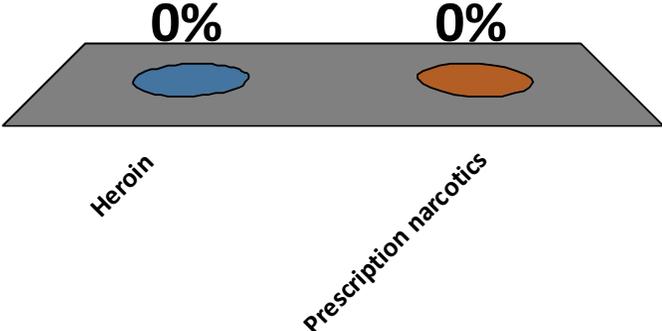


What kills more Virginians?

A. Heroin

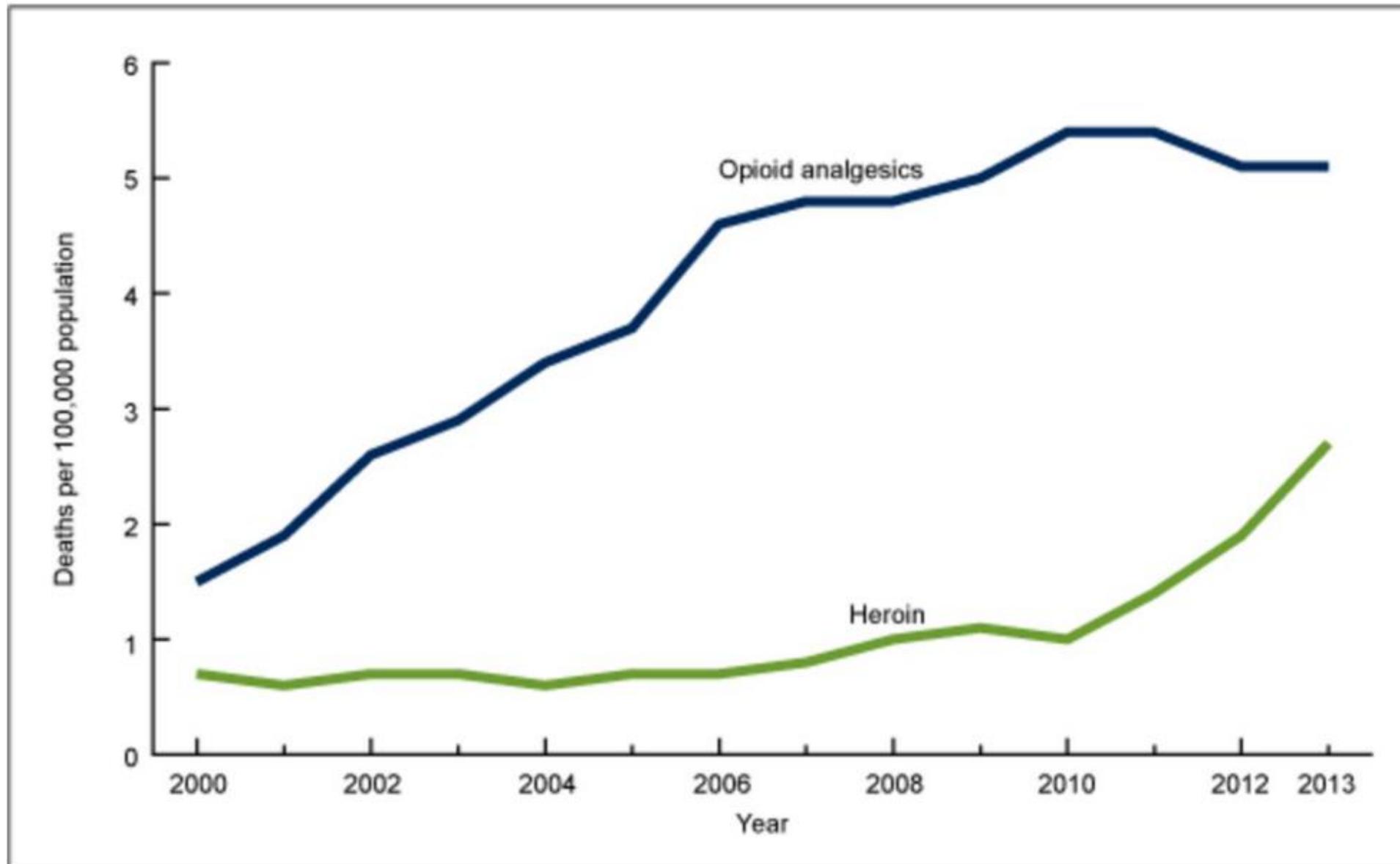
B. Prescription narcotics

Response Counter



Drug poisoning deaths:

Many more from prescription drug abuse than from heroin !



Age-adjusted rates for drug-poisoning deaths, by type of drug: United States, 2000–2013

“We’ve come to really understand that our largely punitive responses to people with substance use disorders is **ineffective.** It’s inhumane, and it’s costly.”

Quote from Michael Botticelli

White House director of National Drug Control Policy
and a person in long-term recovery from a substance use disorder
for more than 26 years

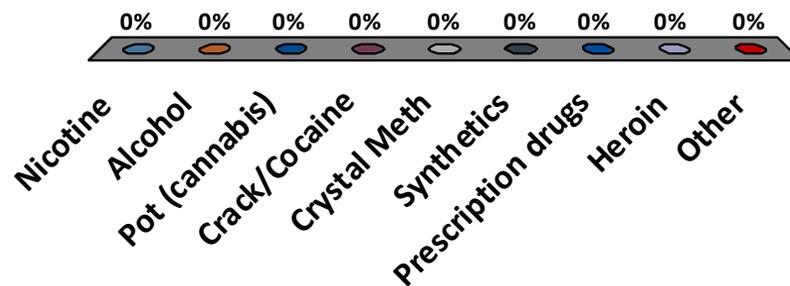
2015
At least
TWO
VIRGINIAN's died
from prescription narcotics
or heroin overdoses
EVERY DAY.



What do you think is the most devastating drug?

- A. Nicotine
- B. Alcohol
- C. Pot (cannabis)
- D. Crack/Cocaine
- E. Crystal Meth
- F. Synthetics
- G. Prescription drugs
- H. Heroin
- I. Other

Response Counter





What makes the
difference?

It's complicated.
Let's just start with the
basics

When do people in our culture learn about serving size?
Consider teaching “Bartender School” to everyone –
parents, co-workers, students



One Standard Drink =



12 oz.
beer



4 - 5 oz.
glass of
wine



1 oz. of
100 proof
liquor

“Bartender School”
 beverage
 serving size
 time
 other variables



Beer Wine Liquor

12 oz 5% alcohol = 5 oz 12% alcohol = 1.5 oz 80 proof alcohol

1 Standard Drink is 0.6 fluid oz. of 100% alcohol.

Equivalency

7% alcohol 40 OZ = 4.5 drinks

12% alcohol 23.5 OZ = 4.7 drinks

12 oz. Beer*
 8 oz. Malt Liquor*
 5 oz. Wine*
 1 oz. 100 proof Liquor*

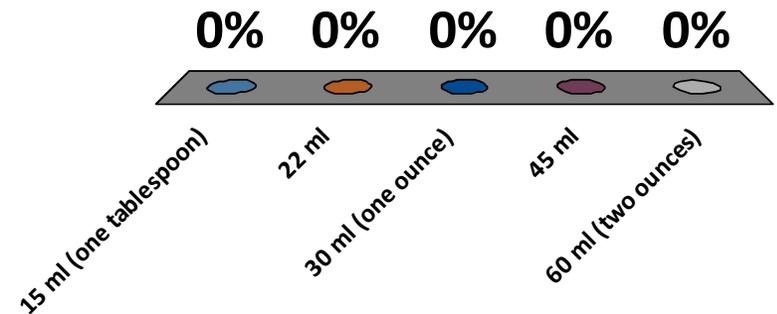
*Lines indicate approximate measurements on a 16 oz cup

Alcohol percentage and container volume will determine number of standard drinks.

This image and all components is licensed by the University of Virginia's Gordie Center for Substance Abuse Prevention under a Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Unported License. See: <http://creativecommons.org/licenses/by-nc-nd/3.0/>

How many ounces (30 ml) is a serving of 151 grain alcohol?

- A. 15 ml (one tablespoon)
- B. 22 ml
- C. 30 ml (one ounce)
- D. 45 ml
- E. 60 ml (two ounces)



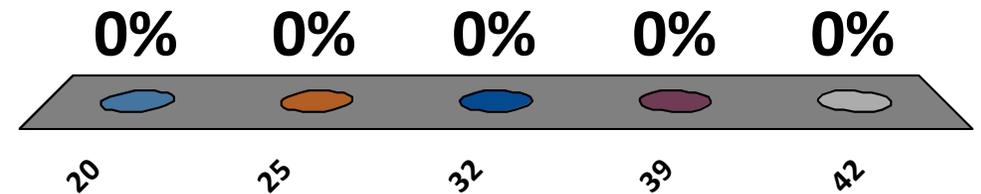
Response
Counter

How many standard drinks per container?

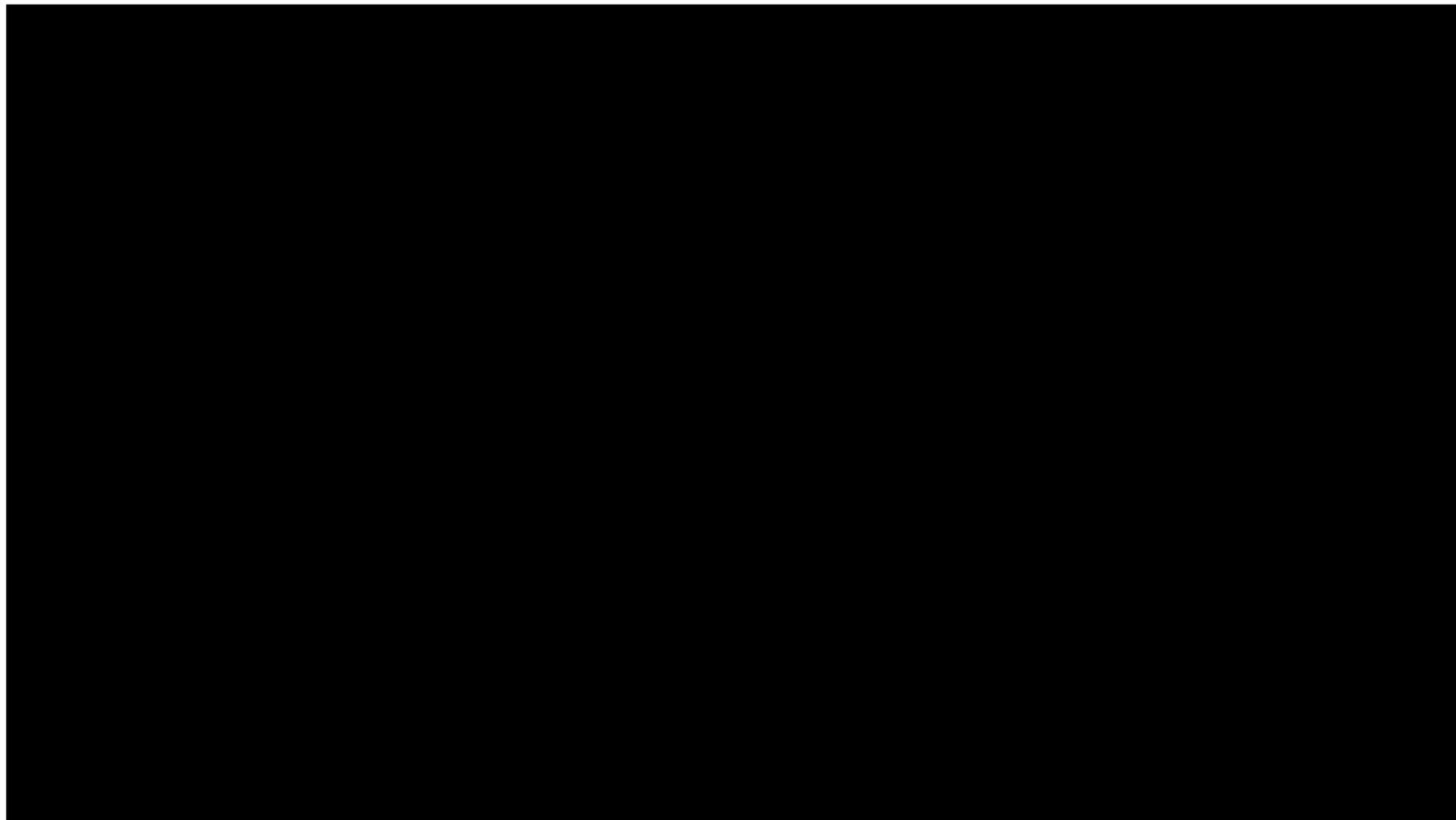
- A. 20
- B. 25
- C. 32
- D. 39
- E. 42



Response
Counter



VCU students Youtube - #labelliquor



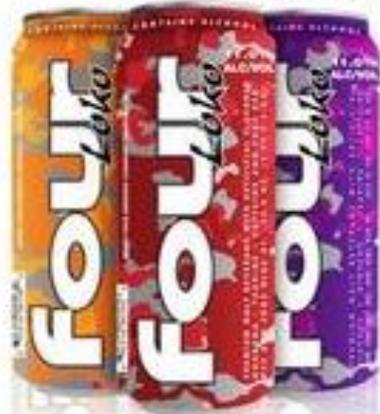
What is a “standard drink”?

Why does it matter?

America (stupid containers)

Australia and UK (smart containers)

four
Loko



The world is a global market and POLICY MATTERS it is a **solution** or problem

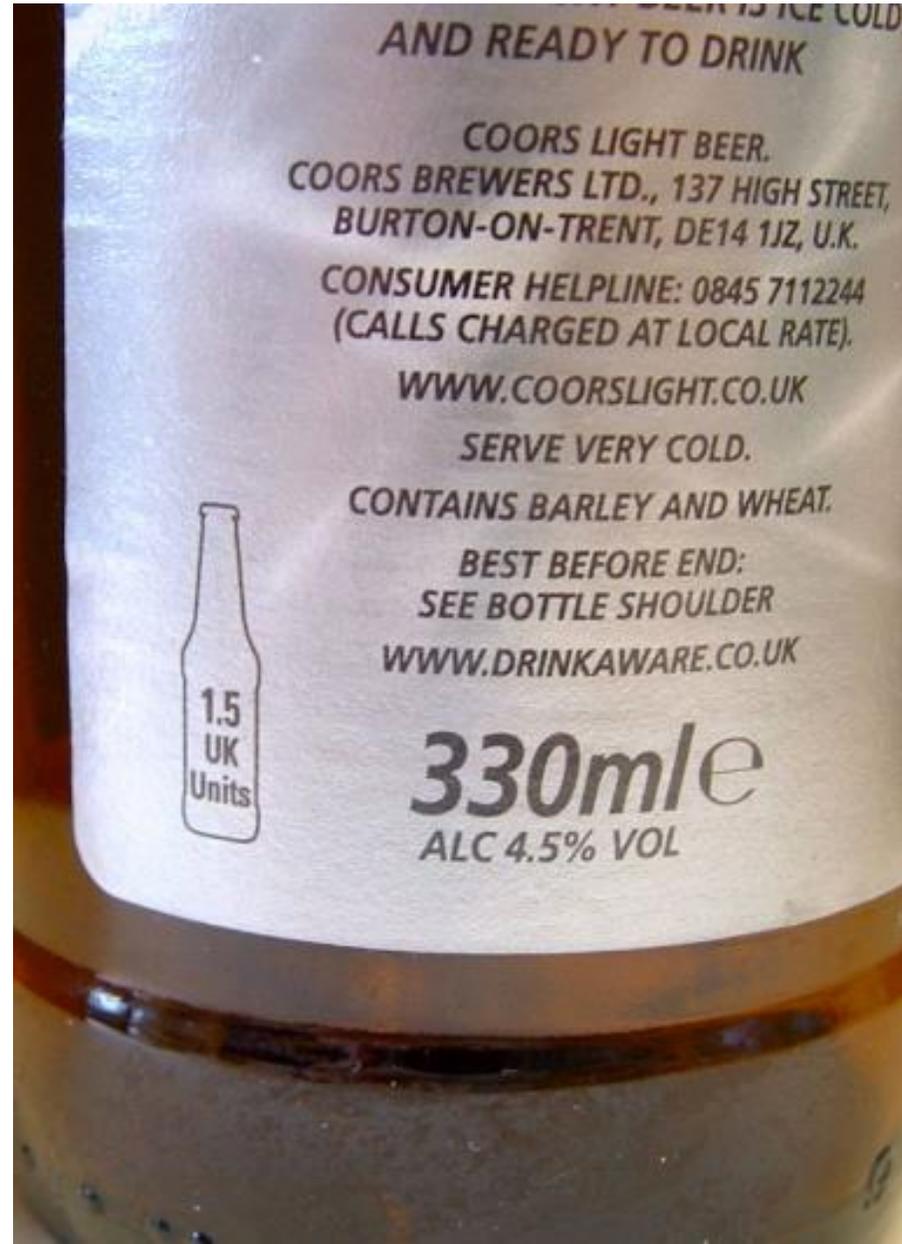
- Let's look at how they do it Down Under in Australia and in the UK



Jack Daniels in the UK



Coors in the UK



Solution... we could make alcohol containers safer.

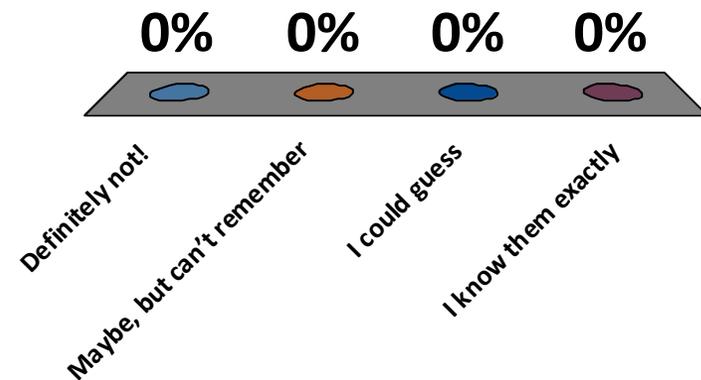
We need unit dose measuring cups for all liquor bottles



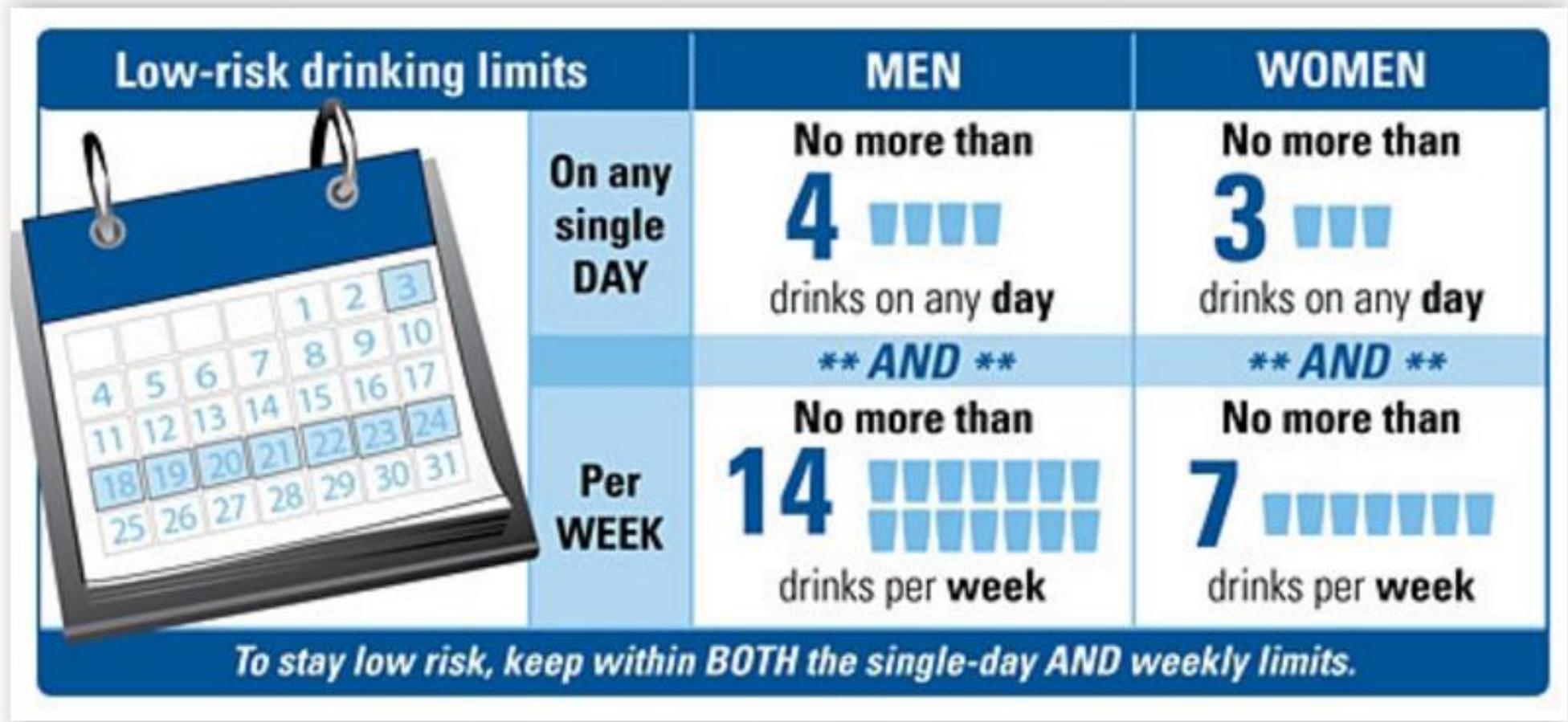
Have YOU ever been taught YOUR low-risk alcohol drinking guidelines?

- A. Definitely not!
- B. Maybe, but can't remember
- C. I could guess
- D. I know them exactly

Response
Counter



U.S. low risk drinking guidelines



<http://rethinkingdrinking.niaaa.nih.gov/>

New Zealand's low risk alcohol guidelines

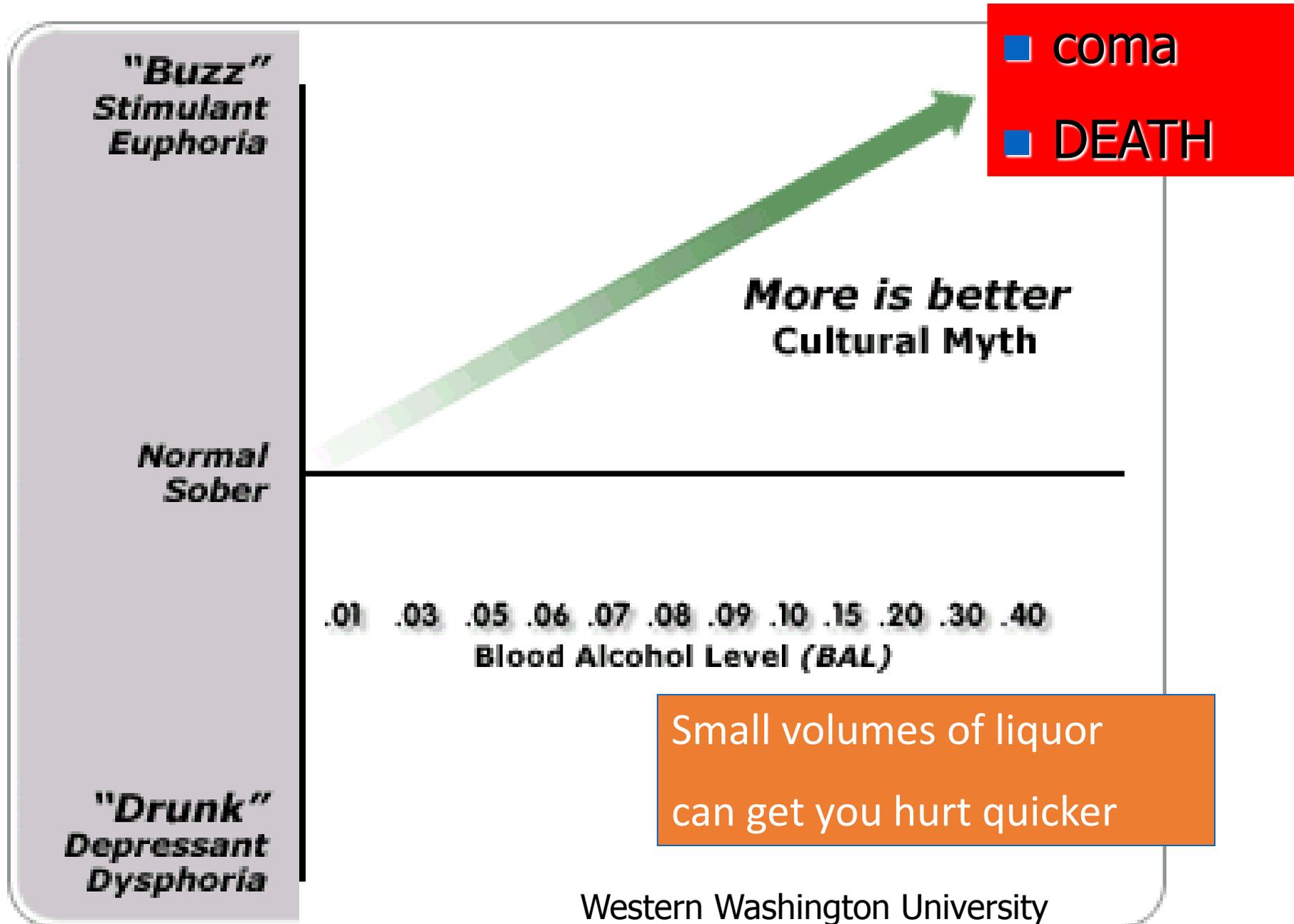
Reduce your long-term health risks		Reduce your risk of injury		Pregnant women
No more than...		No more than...		No alcohol
2	3	4	5	0
STANDARD DRINKS	STANDARD DRINKS	STANDARD DRINKS	STANDARD DRINKS	STANDARD DRINKS
Daily		On any single occasion		
and no more than 10 a week	and no more than 15 a week			
And				
at least 2 alcohol-free days per week				There is no known safe level of alcohol use at any stage of pregnancy

Try to avoid setting "habits"

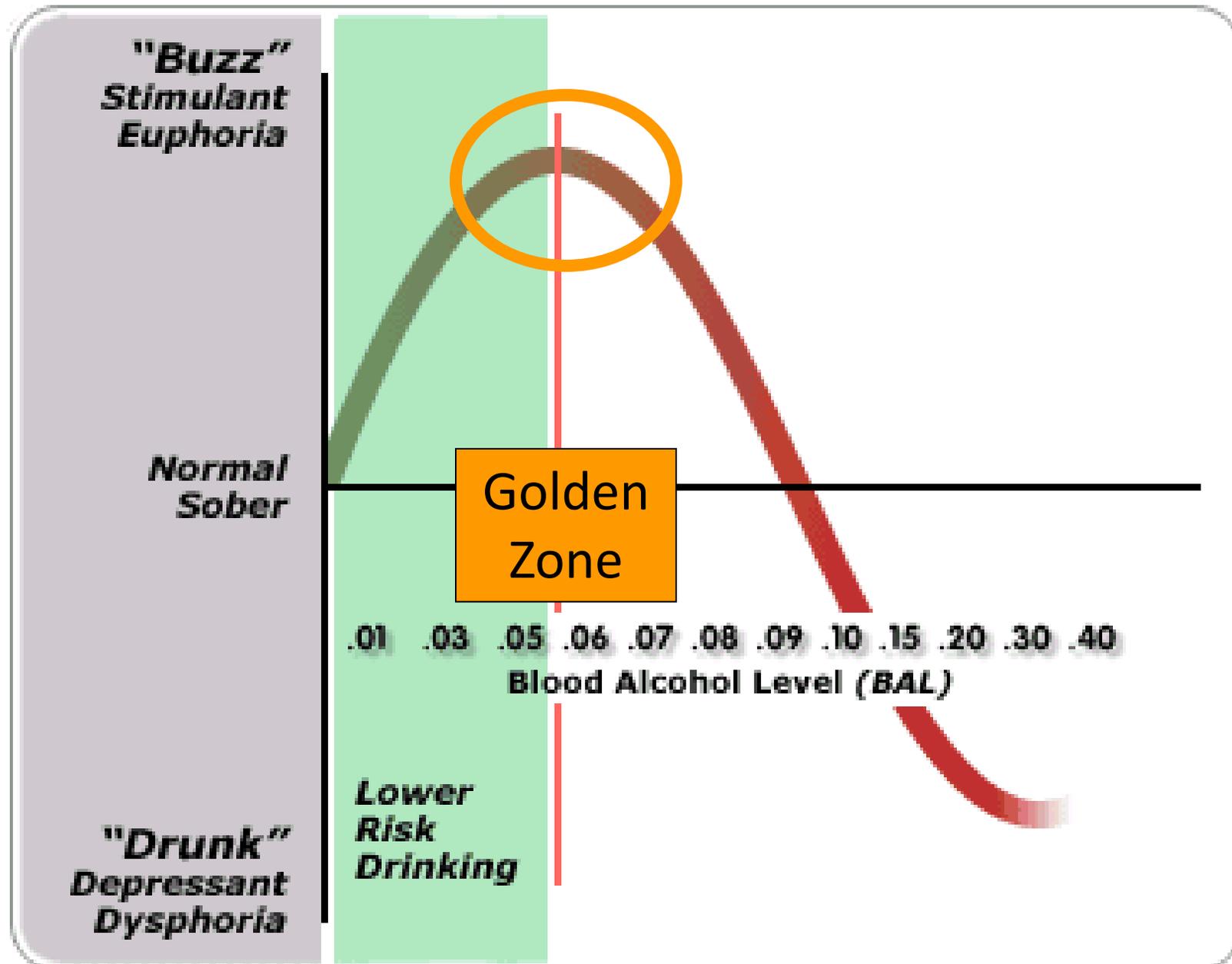
Instead engage the prefrontal cortex



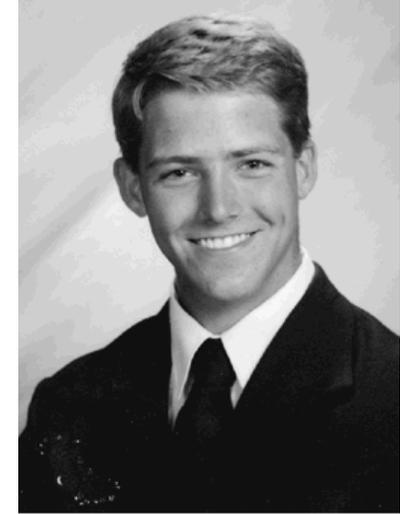
Myth of the bigger, better buzz



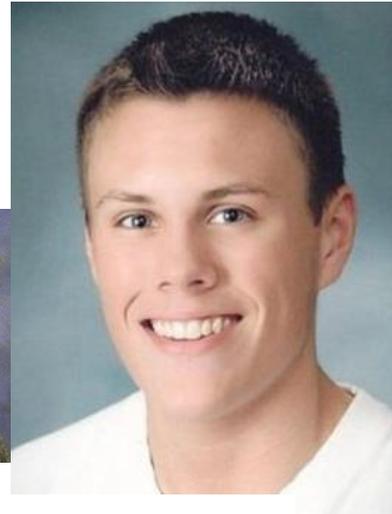
Reality of Bi-phasic Response



Alcohol Overdoses & death at college



*Courtesy of MIT News Office
Scott S. Krueger '01*




GORDIE



One new **solution** is bystander training

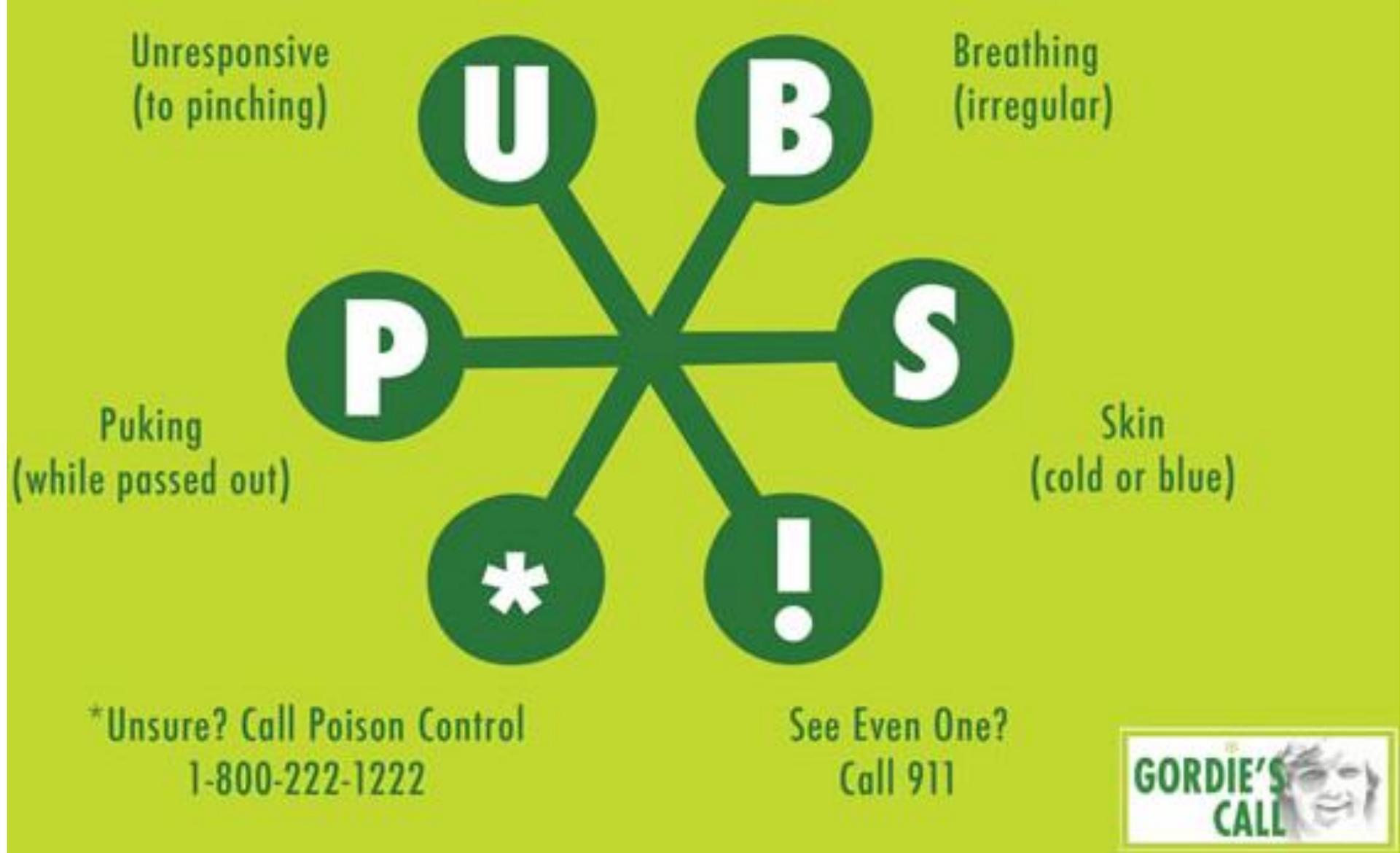
It's normal to freeze and become a bystander - Training helps people act



5 step bystander skill training

1. Notice the event
2. Interpret event as a problem
3. Feel Responsible
4. Have a range of action ideas
5. Step-up and act

<http://stepupprogram.org/>

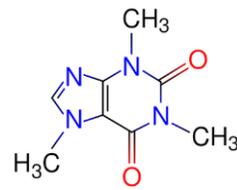
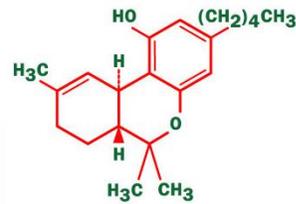


Signs of Alcohol Overdose

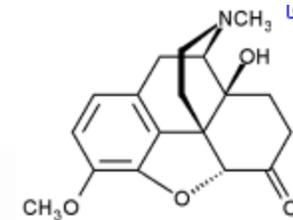
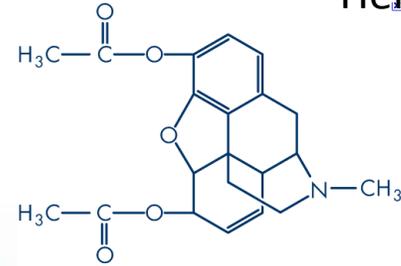
One possible solution:

Provide a framework for understanding all “molecules” – synthetic or natural

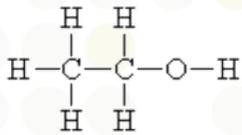
THC – “pot”



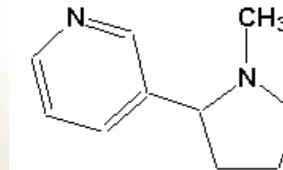
Heroin



Alcohol



Oxycodone



Nicotine



Complex mix of co-factors

Nature

Genes

Nurture

Family/culture/policies

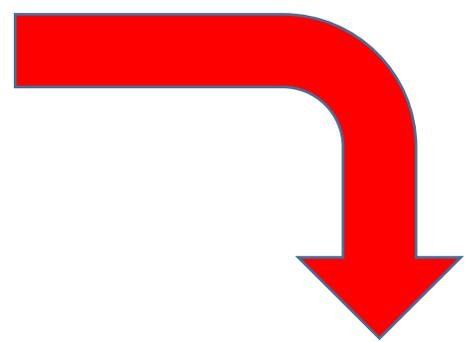
Slings & Arrows

Unique to you



Exposure (try)

Genes



Disorder

Environment

Environment



SPIT FOR SCIENCE

THE VCU STUDENT SURVEY

GENETICS

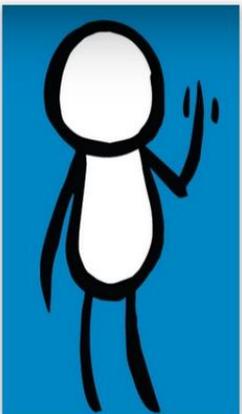
Biological Response to Alcohol

The “tolerance” with which you are born
and the way you metabolize drugs

ENVIRONMENT

“Situational Tolerance”

How repeated environmental
cues get linked to tolerance



College Behavioral and Emotional Health Institute

www.cobe.vcu.edu

Science will
be a big part
of the
solution!

Will Your Toddler Be a Drinker? Personality May Tell

Laura Poppick, Staff Writer | July 10, 2013 04:01pm ET

8

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ALCOHOLISM: CLINICAL AND EXPERIMENTAL RESEARCH

Vol. **_No. *
** 2013

Adolescent Alcohol Use is Predicted by Childhood Temperament Factors Before Age 5, with Mediation Through Personality and Peers

Danielle M. Dick, Fazli Alev, Shawn J. Latendresse, Matt Hickman, Jon Heron, John Madeod, Carol Johnson, Barbara Maughan, Glyn Lewis, and Kenneth S. Kendler

or emotionally

Pin it

Different Pathways of Risk for Substance Use Disorder

- **Externalizing:** sensation-seeking, impulsivity
- **Internalizing:** Drinking to cope, anxious
- **Physiological:** Low level of response to alcohol

Risk Pathway – Externalizing

Sensation Seeking, Impulsivity, Rebellious

- What would be the WORST possible way to address these young people who are at risk?



Outdoor adventure therapeutic programs

You can't replace something...
with nothing

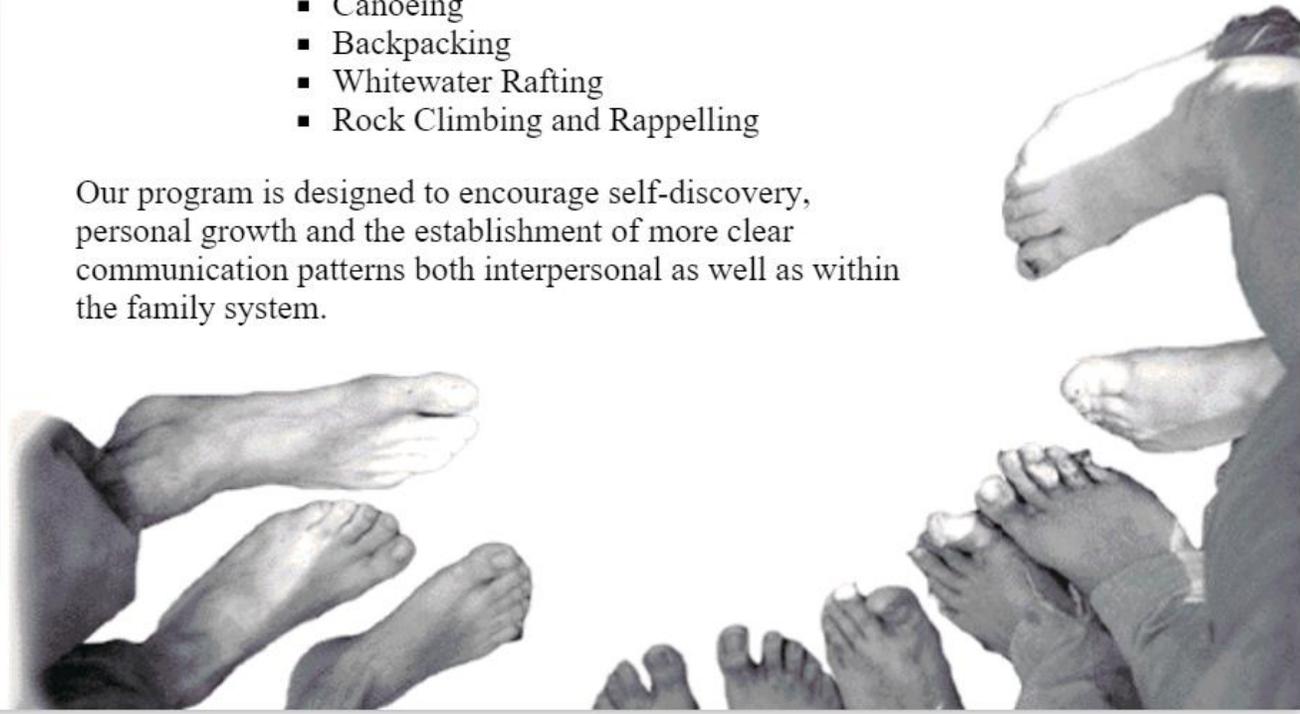


NEW PATHS For Adolescents and Their Families

Blackwater Outdoor Experiences (BOE) is an experiential, therapeutic program of challenging personal and group activities including:

- Skiing
- Caving
- Canoeing
- Backpacking
- Whitewater Rafting
- Rock Climbing and Rappelling

Our program is designed to encourage self-discovery, personal growth and the establishment of more clear communication patterns both interpersonal as well as within the family system.

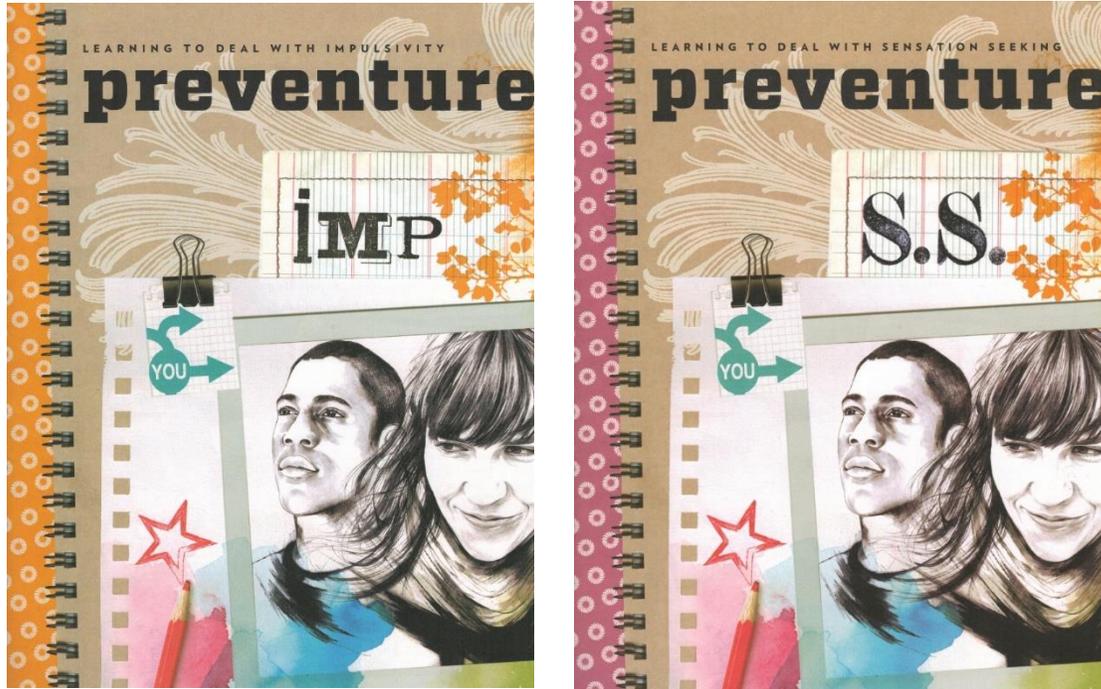


“PreVenture” Program in Europe

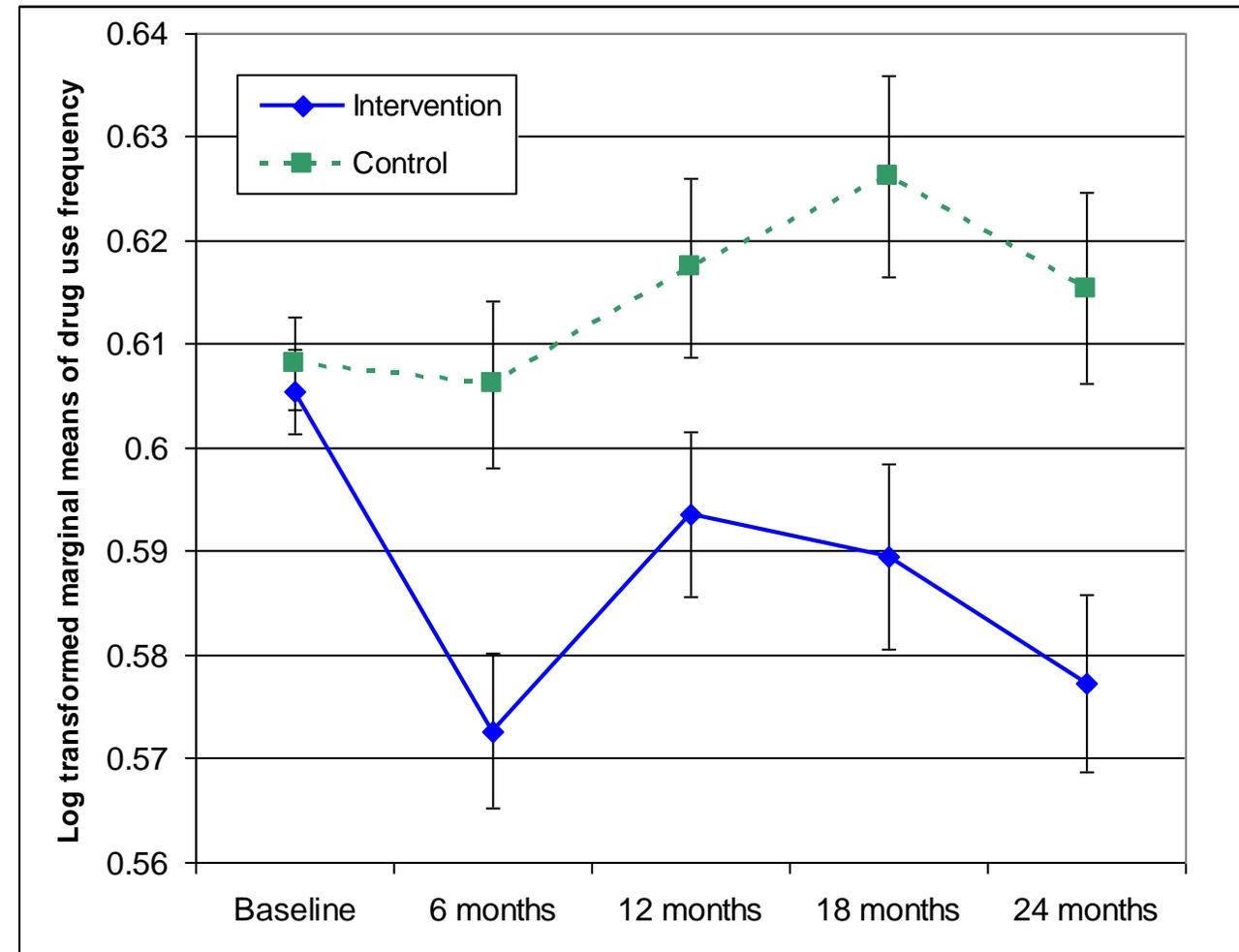
Researcher Jasmin Vassileva PhD

VCU Institute for Alcohol and Drug Studies

Addresses Impulsivity and Sensation Seeking



Conrod, Castellanos-Ryan, Strang (2010). Arch Gen Psychiatry



Risk Pathway – Internalizing

Anxious, using to cope

- Anxiety –genetic roll of the dice for many people
- Anxiety responds best to skills training
- Mindfulness and Skills Training

Risk Pathway

Biological Response

- There is No ONE gene for substance use disorder
- MULTIPLE genes are involved
- Outcome multifactorial
 - Depends on gene and substance and environment



Guest Blog

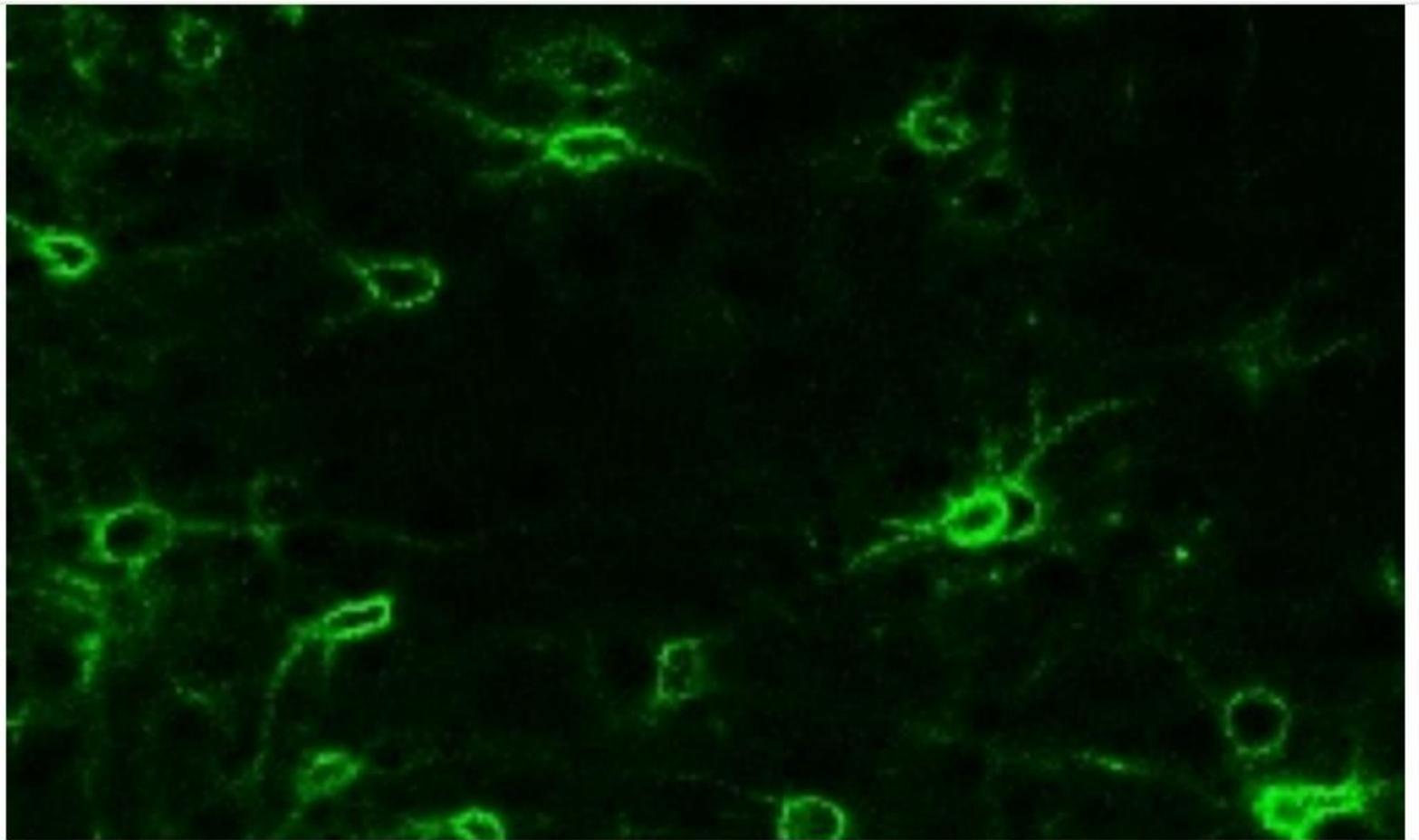
Why Binge Drinking May Wire the Brain for Alcohol Dependence

After surviving a series of benders, neural circuits get locked into a firing pattern that compels alcohol seeking

By R. Douglas Fields on October 23, 2015

Why can't they just stop drinking?

After binge drinking, neurons in brain circuits responsible for alcohol addiction become encased in a protein material, called a perineuronal net. Drugs that can break down the glue-like cement in perineuronal nets could offer a new approach to treatment.



Proteins that surround neurons (*green*) in an area of the cerebral cortex may solidify compulsive drinking behaviors.

Amy Lasek

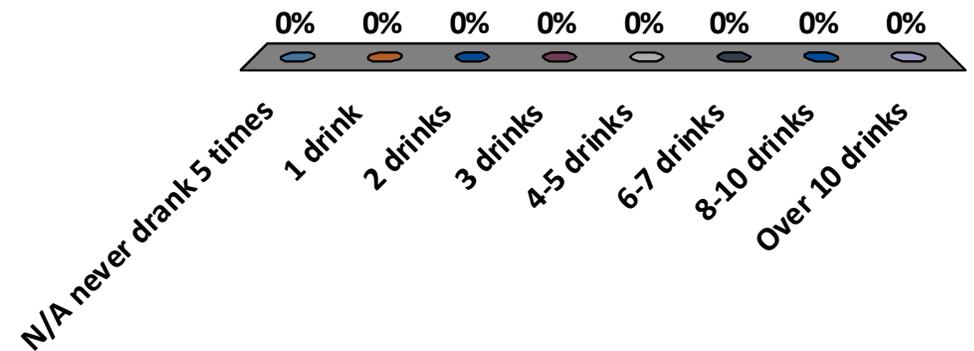
[http://blogs.scientificamerican.com/guest-blog/why-binge-drinking-may-wire-the-brain-for-alcohol-dependence/?ct=t\(UReport_Feb19_2016\)](http://blogs.scientificamerican.com/guest-blog/why-binge-drinking-may-wire-the-brain-for-alcohol-dependence/?ct=t(UReport_Feb19_2016))

BIOLOGICAL RESPONSE

The first 5 times you drank, how many did it take for you to **feel tipsy or have a buzz?** (Research by Marc Schuckit)

- A. N/A never drank 5 times
- B. 1 drink
- C. 2 drinks
- D. 3 drinks
- E. 4-5 drinks
- F. 6-7 drinks
- G. 8-10 drinks
- H. Over 10 drinks

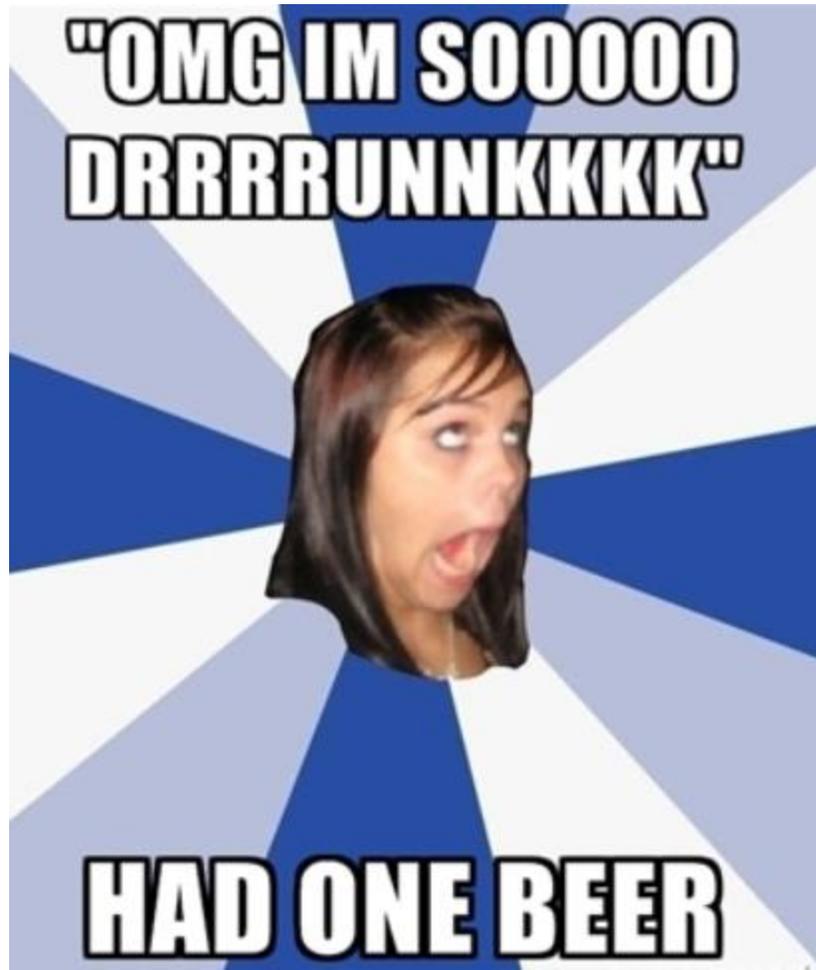
Response Counter



Level of Response is a genetic thing

High Response
“Cheap Drunk”

Low Response
“Hollow leg”



Lets talk about GENETICS and Primates...

The monkeys in the following YouTube
are NOT trained.

A “teetotaler”
is a total NON drinker

Youtube: Alcoholic Vervet Monkeys



The monkey's drink differently



Some reject all
alcohol

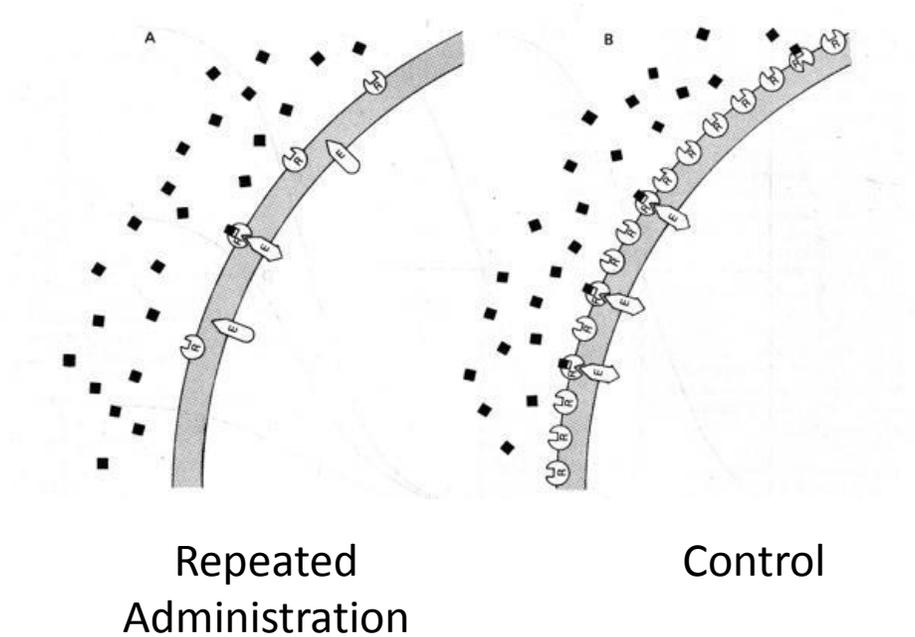
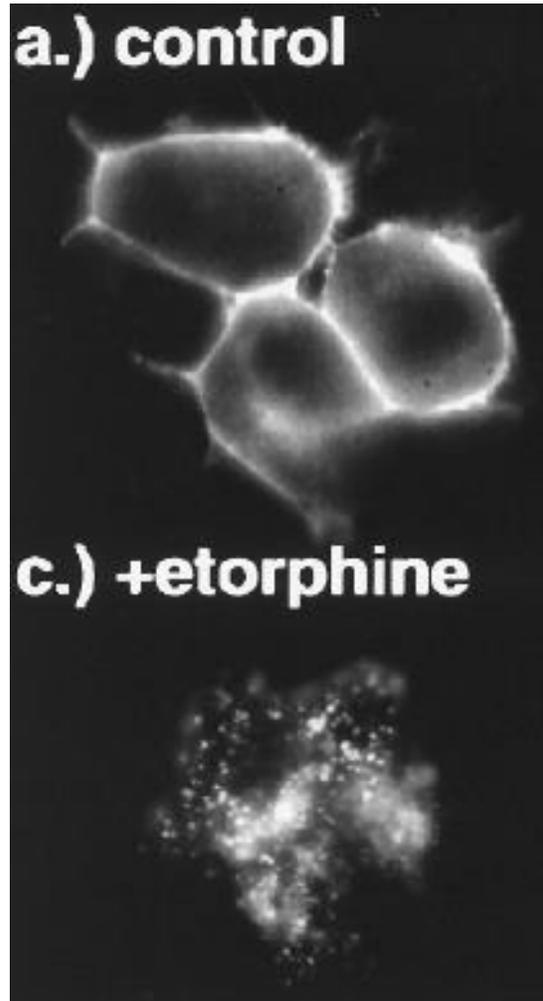


Others drink until
they pass out

Receptor Downregulation

Prescription narcotics and heroin use causes receptors to downregulate

You have LESS receptors for your own endogenous opiates and thus when people stop they have a great deal of trouble experiencing any pleasure and they ache and are fatigued



Zastrow et. al. (1996) The Journal of Biological Chemistry

VCU

© Tricia H. Smith PhD.

As a parent , **what would you want to know** about pain meds if your child has to have surgery?

- Try Tylenol and Advil FIRST
 - Studies show they are often equally as effective
- For acute injury 2-3 days of opiates is sufficient
- Keep control of the medication
- Destroy remaining pills (crush, mix with coffee grounds)
- Seriously QUESTION any doctor who gives large amounts without a pain contract and follow up

Solution - The Wisdom of Recovery

Wisdom of A.D.G.O.S

Another Darn Growth Opportunity

Success



what people think
it looks like

Success



what it really
looks like

12/12/15

Collegiate Recovery
Programs
150 nationally

VCU has
Rams in Recovery



Virginia awakening to campus drug problems, looking for solutions

Bonnie Morgan lived in world capitals, was an A student at her high school in Alexandria, and used her first illicit drug at age 13.

Motivational Interviewing

is the MOST useful tool I have dealing with ambivalent young people!



Let's play a Game

- The game is called
 - **WIN AS MUCH AS YOU CAN!!!**
- Stand up
- Find a partner
- place right feet side by side
- “shake” right hands

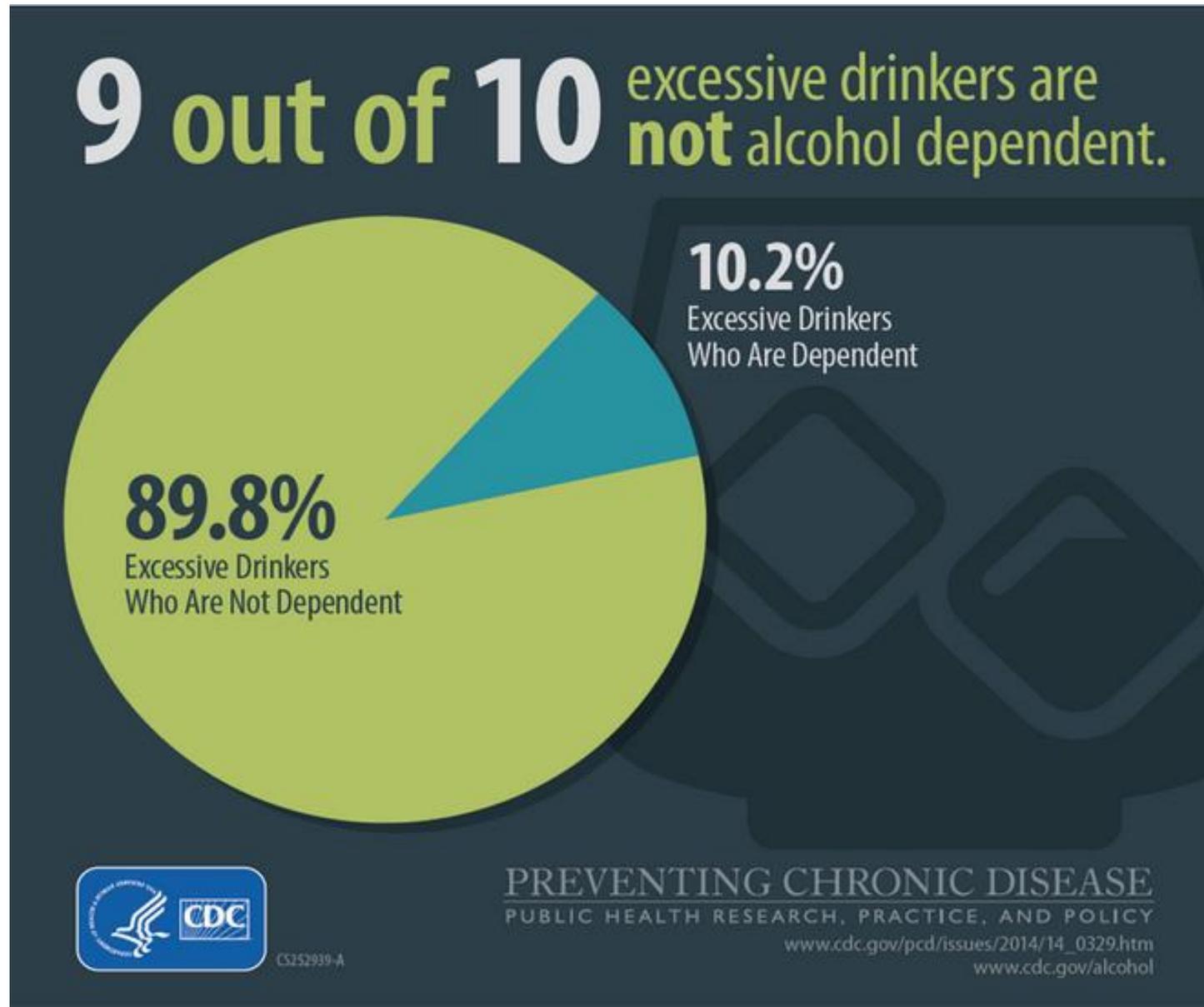


If you push...



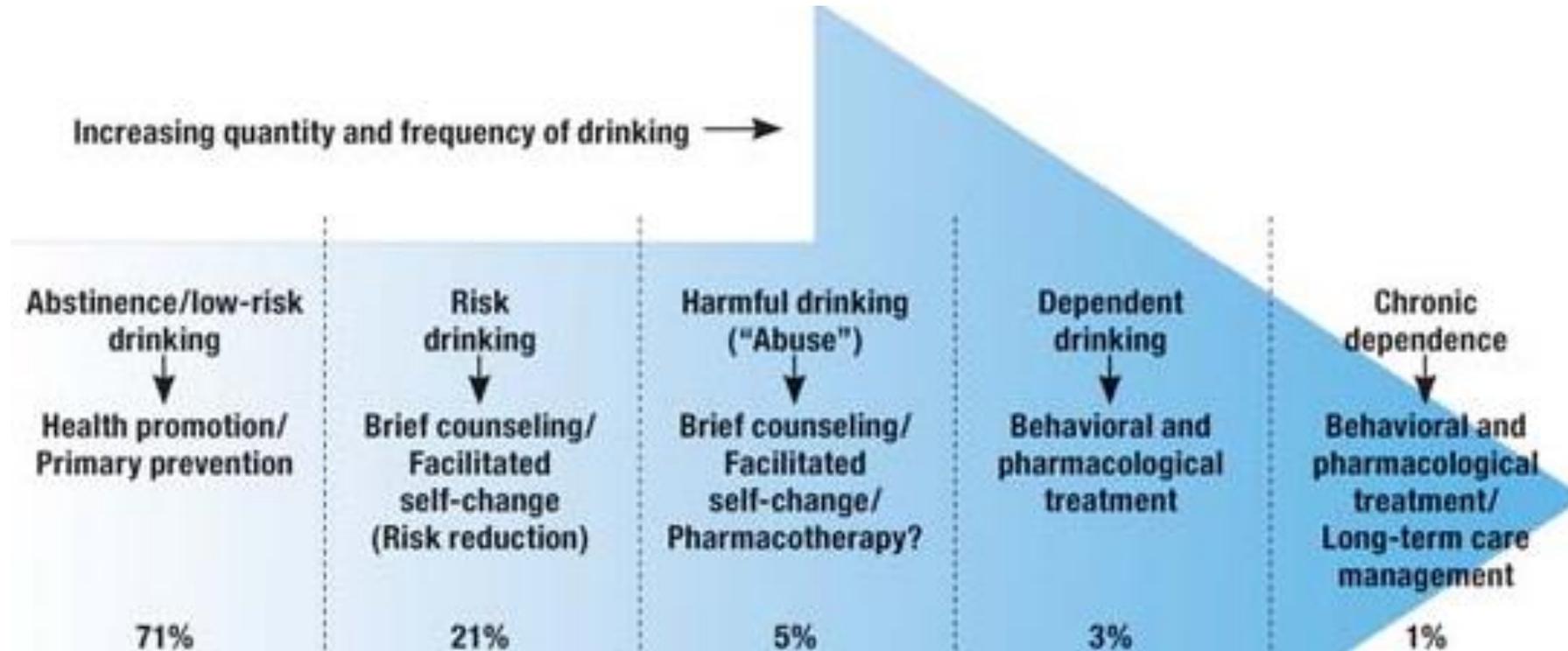
people just
naturally
push back.

Why MI is an important tool...



This is why MI is important

Excessive drinking is a spectrum open to change... not a lost cause





Understanding & Exploring
the PICTURE BOOK of someone else's life



Support Self-Efficacy



The “CHANGE TALK” needs to come out of their mouths!

People believe what THEY say!

(Think about it... do you believe what people tell you to do?)

The Social Norms Approach

*“If you focus on problems,
you grow more problems.
If you focus on health,
you grow more health.”*

-Mike Haines

Resources

- www.socialnorms.org
- www.mostofus.org
- www.thewell.vcu.edu (see media library)

Health & MISPERCEPTIONS

Perception

Overestimate

Unhealthy **visible** behaviors

-smokers, drunks, violence,

goofing off, credit card debt, etc.

GAP

Underestimate

Healthy **less visible** behaviors

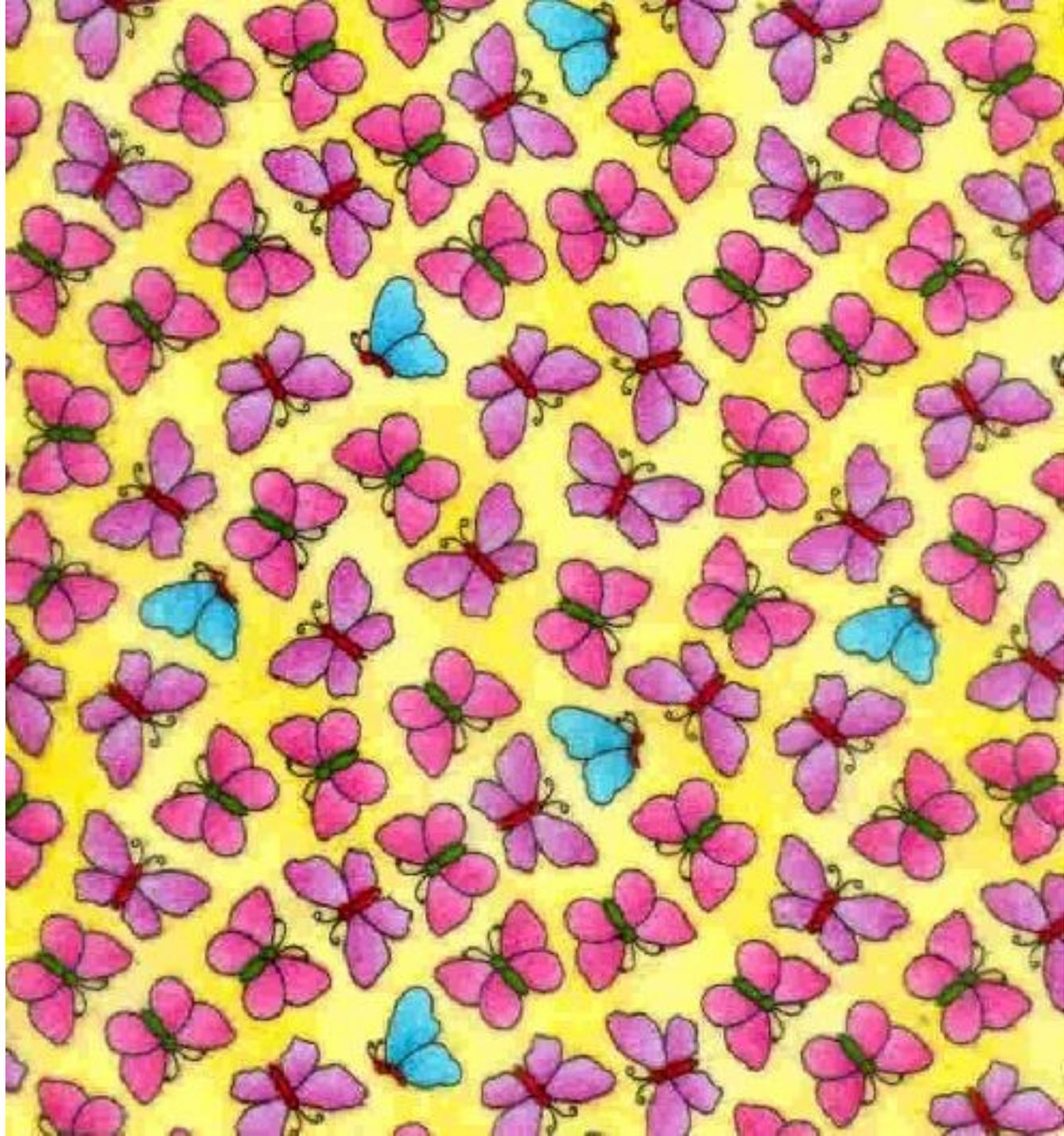
-non-smokers, moderate drinkers

academic seriousness, prayer

REALITY

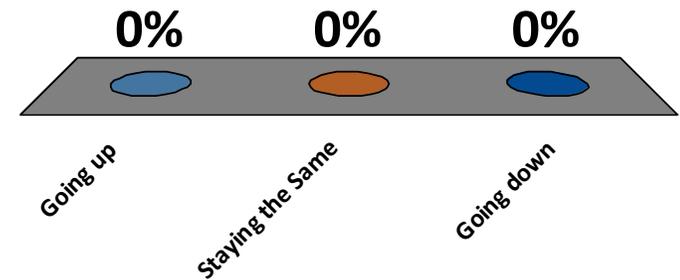
The majority
versus
the “very visible”
minority

Prevention should
help keep healthy
kids healthy!



The trend for alcohol use among high school students is....

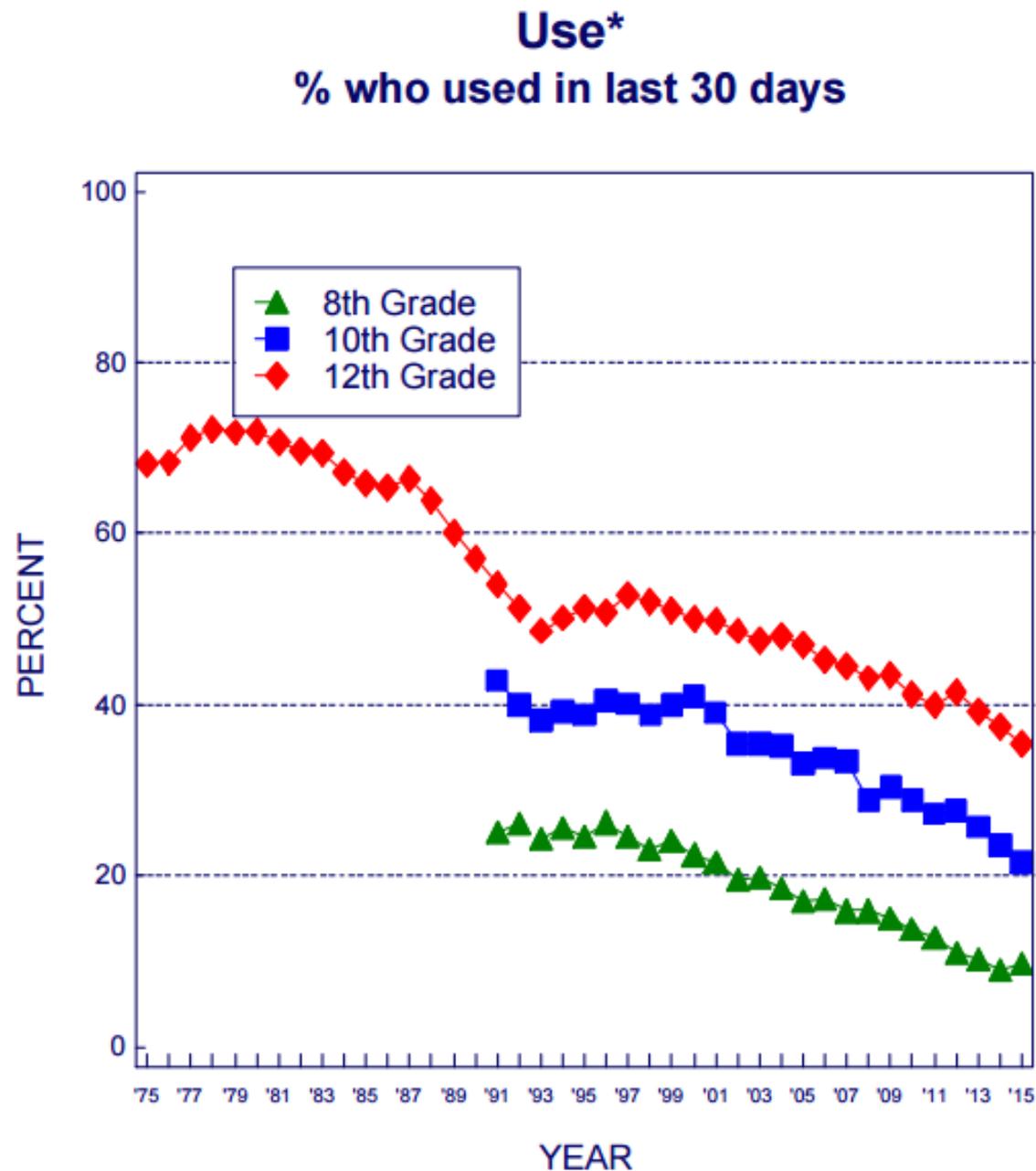
- A. Going up
- B. Staying the Same
- C. Going down



Response
Counter

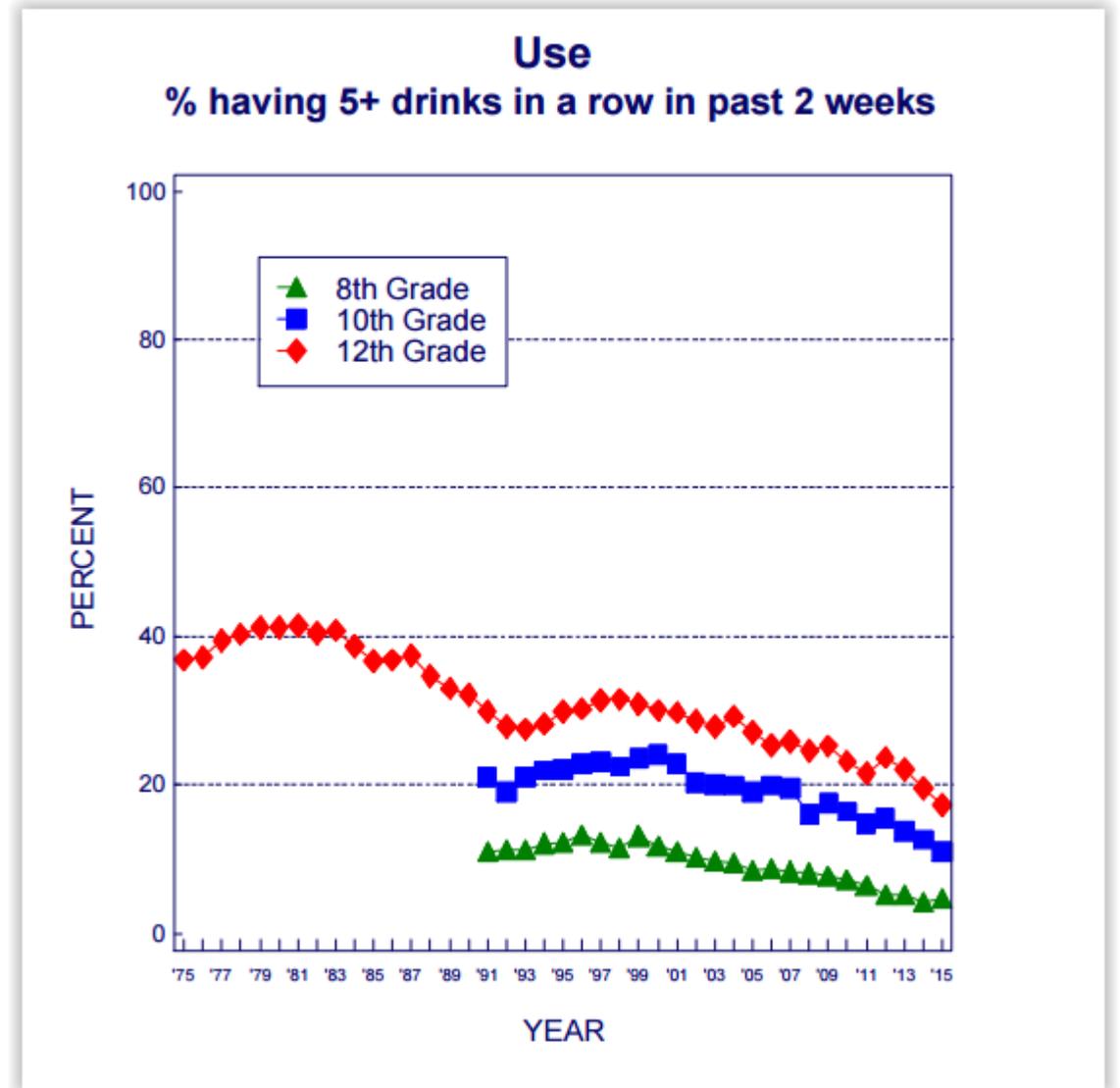
www.monitoringthefuture.org

2015 report on last 30 day alcohol use in high school



Heavy episodic drinking in HS students

www.monitoringthefuture.org



Harm Reduction

Highly recommend viewing...

8 minute YouTube on “Situational Tolerance” by Jason Kilmer

The screenshot shows a YouTube video player with a search bar containing "situational tolerance jason kilmer". The video content is a slide titled "Tolerance" with the following text:

Siegel, S. & Ramos, B.M.C. (2002)
Applying laboratory research: Drug anticipation and the treatment of drug addiction. *Experimental and Clinical Psychopharmacology*, 10, 162-183.

The slide also contains several paragraphs of text, including a section titled "Applying Laboratory Research: Drug Anticipation and the Treatment of Drug Addiction" and a section titled "The intensity of the situation...".

At the bottom of the slide, there is a stack of blue plastic cups.

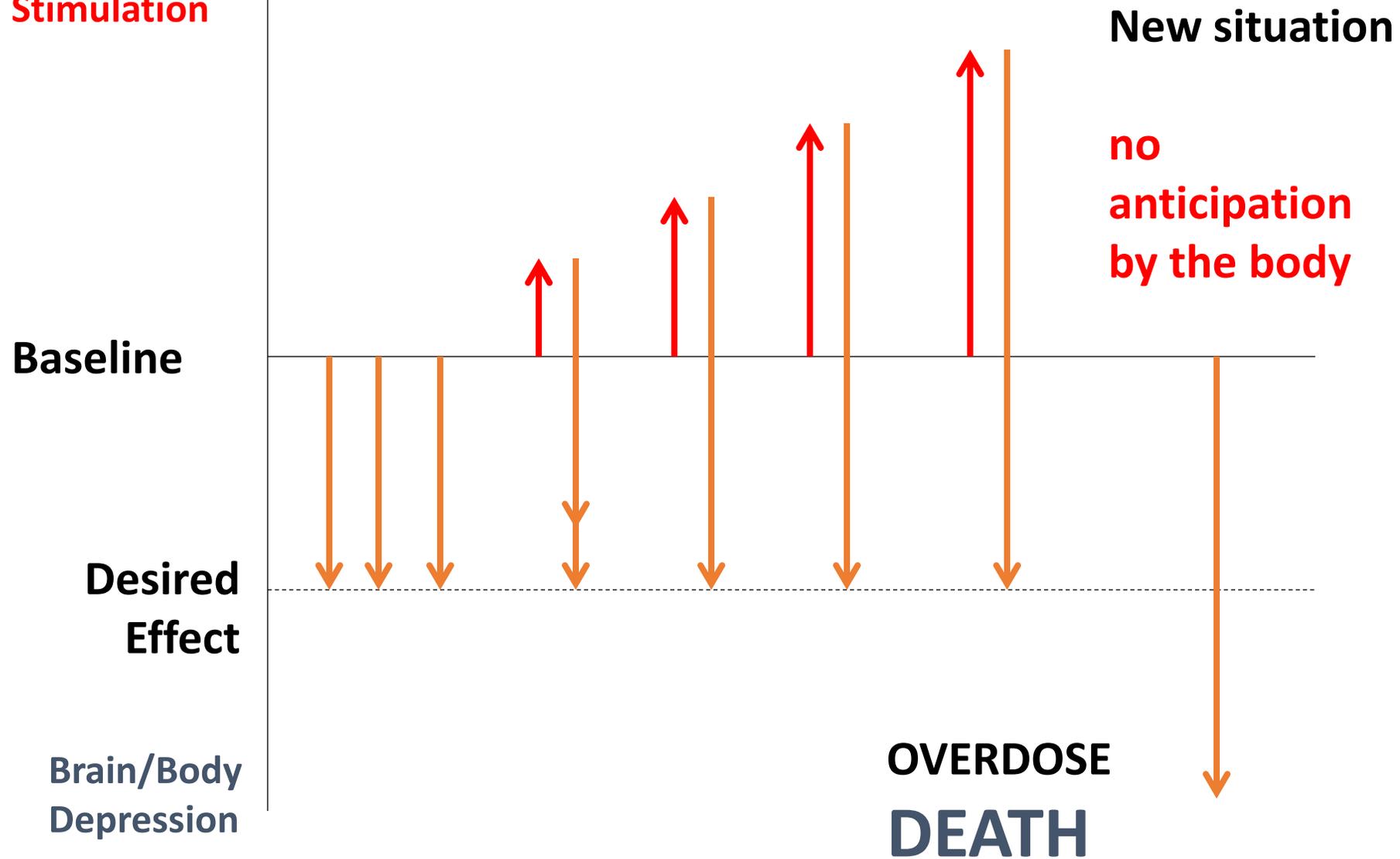
The video player interface shows a play button, a progress bar at 0:07 / 7:49, and various control icons.

Situational Tolerance

JustSay KnowVCU

Situational Tolerance

Brain/Body
Stimulation



What is the most devastating drug?



The one you like
the BEST!

The one your
friends are using.

Was this helpful?(be honest - responses hidden)

- A. Yes, we should have it again next year
- B. Yes, but not again next year
- C. Moderately
- D. A little
- E. Not really at all helpful

Response
Counter



“My 3 flakes”



Jan 2004

How are you feeling? A little confused?
Any questions?

